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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,464	03/18/2002	James W. Schmitkons	Nor-951A	8796

7590 10/01/2003

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EXAMINER

WILLIAMS, JOSEPH L

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 10/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/088,464

Applicant(s)

SCHMITKONS ET AL.

Examiner

Joseph L. Williams

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 11 is/are rejected.
- 7) ☒ Claim(s) 7-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Specification

1. The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

Claim Objections

2. Claims 8-10 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend upon another multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims not been further treated on the merits.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohtake et al. (US 5,039,918).

Regarding claim 1, Ohtake ('918) teaches a process for the generation of ultraviolet radiation from a microwave source and an electrodeless tube placed in a cavity excited by means of a microwave generator and resonated at an appropriate

Art Unit: 2879

mode, characterized in that it consists in orienting the polarized stationary electric field (E) of constant amplitude parallel to the axis of the discharge tube and overdimensioning the cavity so that this tube has its longitudinal dimension along a resonance antinode of the mode excited in the cavity.

Regarding claim 2, Ohtake ('918) teaches a resonant cavity, at least one microwave emitter feeding into this cavity, a means of coupling between the cavity and the emitter, a device for adjusting the frequency tuning of the cavity, and a long electrodeless tube containing a gas at a given pressure, placed in the cavity along the direction of the electric field (E) component for the excited mode, whereby the cavity is over dimensioned so that said component has a resonance antinode along the length of the tube.

Regarding claim 3, Ohtake ('918) teaches that the cavity is prismatic and has a rectangular cross section to allow the excitation of the TE₀₁₂ mode of the hyperfrequency radiation, whereby the tube is placed along the zero-order direction of the mode.

Regarding claim 4, Ohtake ('918) teaches that the cavity is cylindrical with a partially elliptical cross section, where by the tube is placed along one of the foci of the cavity,

Regarding claim 5, Ohtake ('918) teaches that the cavity has a polished reflecting wall making it possible to focus the ultraviolet radiation emitted by the tube at the other focus of the cavity, excited on the TM₀₁₀ mode of the hyper-frequency radiation.

Art Unit: 2879

Regarding claim 6, Ohtake ('918) teaches that the cavity has an open side parallel to the tube and consisting of a fine mesh transparent to the ultraviolet radiation emitted by the tube and opaque to the hyperfrequency radiation.

Regarding claim 11, Ohtake ('918) teaches the treatment of materials in motion relative to the ultraviolet radiation produced.

Allowable Subject Matter

4. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph L. Williams whose telephone number is (703) 305-1670. The examiner can normally be reached on M-F (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (703) 305-4794. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Art Unit: 2879

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Joseph Williams

Examiner
Art Unit 2879